

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**



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Order Instituting Rulemaking to  
Consider Alternative-Fueled Vehicle  
Programs, Tariffs, and Policies.

Rulemaking 13-11-007  
(Filed November 22, 2013)

**OPENING WORKSHOP COMMENTS OF  
SOUTHERN CALIFORNIA GAS COMPANY (U 904 G)**

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**Dated:** May 18, 2016

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Pursuant to the Amended Scoping Memo and Ruling of the Assigned Commissioner and Administrative Law Judge, issued March 30, 2016 (Amended Scoping Memo), Southern California Gas Company (SoCalGas) submits these comments on the California Public Utilities Commission's (CPUC or Commission) April 29, 2016 workshop, held in collaboration with the California Air Resources Board (ARB) and the California Energy Commission (CEC), on transportation electrification issues raised by Senate Bill (SB) 350 (Workshop).

**I. INTRODUCTION**

SB 350, codified in Public Utilities Code § 740.12(a)(1), states the following goal: "Advanced clean vehicles and fuels are needed to reduce petroleum use, to meet air quality standards, to improve public health, and to achieve greenhouse gas emissions reduction goals." To that end, SoCalGas supports ARB's consideration of clean low-carbon renewable fuels for freight movement and passenger transportation and CEC's inclusion of the Cummins Westport ISL G Near-Zero Natural Gas Engine, in their respective presentations at the April 29, 2016 Workshop.

In response to Scoping Memo Questions 1 and 2 in Appendix B,<sup>1</sup> SoCalGas would like to take this opportunity to provide additional information on near-zero natural gas engines using renewable natural gas (RNG) for the Commission's consideration in its efforts to continue implementing SB 350. In providing guidance for electric utilities to file applications for programs and investments to accelerate widespread transportation electrification in implementing SB 350, the Commission should avoid prescribing transportation sector priorities or specific technologies and fuel pathways that may discourage the development and investment in viable alternative fuel technologies that may also play an integral role in meeting SB 350's goals. While the Workshop focused on light-duty vehicles and electric vehicle technologies, SB 350 also includes medium- and heavy-duty vehicle sectors and near-zero emission vehicles. The Cummins Westport ISL G Near-Zero Natural Gas Engine mentioned in the CEC's presentation can provide a commercially proven, broad-based, and affordable strategy to immediately achieve major reductions in emissions of criteria pollutants, air toxins, and greenhouse gases (GHG) from the on-road heavy-duty vehicle (HDV) sector.

## **II. RESPONSE TO SCOPING MEMO APPENDIX B – WORKSHOP QUESTIONS**

### **1. In what ways should the Application Guidance Straw Proposal in Appendix A of this Scoping Memo be modified to better align with the mandates of SB 350?**

Although SB 350 focuses on transportation electrification, the statute also calls for expanding access to both zero-emission and near-zero emission vehicles.<sup>2</sup> ARB is working with the State's transportation and energy agencies to develop the California Sustainable Freight

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<sup>1</sup> See Scoping Memo, Appendix B, Question 1 and 2: 1) In what ways should the Application Guidance Straw Proposal in Appendix A of this Scoping Memo be modified to better align with the mandates of SB 350? 2) In light of current industry development and technology availability, should the Commission focus on particular transportation sectors or market barriers (e.g., light, medium or heavy duty vehicles, fuel types, or specific applications), and why?

<sup>2</sup> See SB 350 (Statutes 2015, Chapter 547), at Section 7. See CAL. PUB. UTIL. CODE §25327(d).

Strategy.<sup>3</sup> This effort focuses on steps to transform California's freight transport system, including deploying zero- and near-zero emission freight equipment powered by renewable energy sources. The Straw Proposal in Appendix A of the Scoping Memo should incorporate the inclusion of such clean transportation options.

**2. In light of current industry development and technology availability, should the Commission focus on particular transportation sectors or market barriers (e.g., light, medium or heavy duty vehicles, fuel types, or specific applications), and why?**

SoCalGas would like to remind the CPUC that this Rulemaking was originally opened to address issues relating to expanding the use of alternative-fueled vehicles (AFV) in California, including natural gas vehicles.<sup>4</sup> With heavy-duty diesel engines being the number one source of smog-forming emissions of oxides of nitrogen (NOx) in California's impacted air basins, rapid implementation of clean engine technology is critical to meeting both public health and climate change goals mentioned in SB 350. The ARB Technology Assessment, issued in 2015, indicated that heavy-duty electric and fuel cell electric vehicles will not be available in the next several decades.<sup>5</sup> Thus, technological solutions to address the heavy-duty sector may need to remain flexible by looking beyond immediate transportation electrification to include rapid deployment of other clean engine technologies.

For example, as mentioned by the CEC at the Workshop, in 2015, Cummins Westport Inc. (CWI) certified the world's first heavy-duty engine at near-zero emission levels -- 90 percent below the existing federal standard, and certified to meet ARB's lowest-tier optional

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<sup>3</sup> Available at <http://www.arb.ca.gov/gmp/sfti/sfti.htm>.

<sup>4</sup> Order Instituting Rulemaking 13-11-007 (Filed November 14, 2013).

<sup>5</sup> See ARB Technology Assessment: Medium and Heavy Duty Battery Electric Trucks and Buses, October 2015, available at [http://www.arb.ca.gov/msprog/tech/techreport/bev\\_tech\\_report.pdf](http://www.arb.ca.gov/msprog/tech/techreport/bev_tech_report.pdf) and ARB Technology Assessment: Medium and Heavy-Duty Fuel Cell Electric Vehicles, November 2015, available at [http://www.arb.ca.gov/msprog/tech/techreport/fc\\_tech\\_report.pdf](http://www.arb.ca.gov/msprog/tech/techreport/fc_tech_report.pdf).

low-NOx emission standard at 0.02 g/bhp-hr NOx. This “next generation” heavy-duty natural gas engine is now commercially available for transit bus, refuse, school bus, and medium-duty truck applications. By deploying this technology for public transportation and other transport that particularly impact disadvantaged communities, this is consistent with SB 350’s goals to address barriers to access for low-income customers to zero-emission and near-zero-emission transportation options.<sup>6</sup> Additional near-zero-emission heavy-duty natural gas engines are expected to follow by 2018, addressing a wider array of medium- and heavy-duty on-road applications. The tailpipe emissions of HDVs running on these engines are as low as emissions associated with generating the electricity used to charge heavy-duty battery-electric vehicles (BEVs).<sup>7</sup>

When paired with RNG, which provides the lowest carbon intensity of any transportation fuel available today, this technology can provide significant GHG emissions reductions (80 percent or greater).<sup>8</sup> At the April 29 Workshop, a number of medium- and heavy-duty electric vehicle technologies were presented, including Class 8 Electric Trucks. However, a Class 8 short-haul truck running on RNG sourced from landfill-diverted organic waste would have the same GHG benefit as replacing two trucks with plug-in electric versions. The same truck fueled with RNG sourced from a dairy facility will have the same GHG benefit as replacing six trucks with plug-in electric versions.<sup>9</sup> In addition to reducing emissions from vehicles, utilizing RNG would reduce organically-occurring methane from dairies would be reduced, which is advantageous to the State as agriculture accounts for the majority of emissions, primarily from

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<sup>6</sup> See SB 350 (Statutes 2015, Chapter 547), at Section 7. See CAL. PUB. UTIL. CODE §25327(d).

<sup>7</sup> See Game Changer Technical White Paper, Gladstein, Neandross & Associates, dated May 3, 2016, at 165, available at [http://ngvgamechanger.com/pdfs/GameChanger\\_FullReport.pdf](http://ngvgamechanger.com/pdfs/GameChanger_FullReport.pdf)

<sup>8</sup> See *id.* at 9.

<sup>9</sup> Based on Carbon Intensity Scores for Heavy-Duty Truck Pathways. Final California Low-Carbon Fuel Standard, 2015.

livestock enteric fermentation and manure management.<sup>10</sup>

With nearly the full range of HDVs covered, the combination of new near-zero emission natural gas engine technology and RNG provides the single best opportunity for California to achieve immediate and substantial NOx and GHG emissions reductions in the on-road heavy-duty transportation sectors. Equally important, major reductions of cancer-causing toxic air contaminants can immediately be realized in disadvantaged communities adjacent to freeways, seaports, and areas of high diesel engine activity, where relief is most urgently needed. Further detail on this technology and associated benefits are provided in a white paper by Gladstein, Neandross & Associates (GNA).

### III. CONCLUSION

SoCalGas requests that the Commission adopt the foregoing recommendations.

Respectfully submitted,

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<sup>10</sup> See California Air Resources Board Website, Sources of CH<sub>4</sub> in California for 2013, *available at* <http://www.arb.ca.gov/cc/inventory/background/ch4.htm>.